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Office of the Attorney General



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August 18, 2003

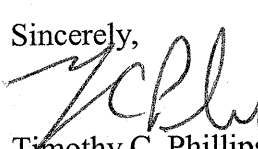
Honorable Deborah Taylor Tate
Chairman
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243

**RE: APPLICATION OF NASHVILLE GAS COMPANY, A DIVISION OF
PIEDMONT NATURAL GAS COMPANY, INC. FOR AN ADJUSTMENT OF ITS
RATES AND CHARGES, FOR APPROVAL OF REVISED TARIFFS AND
APPROVAL OF REVISED SERVICE REGULATIONS, Docket 03-00313**

Dear Chairman Tate:

Enclosed is an original and thirteen copies of the Consumer Advocate's Direct Testimony of Dan McCormac. Also enclosed is a Joint Exhibit of the CAPD staff. Kindly file same in this docket. Copies are being sent to all parties of record. If you have any questions, kindly contact me at (615) 741-8700. Thank you.

Sincerely,


Timothy C. Phillips
Assistant Attorney General

Enclosures

cc: All Parties of Record

#67856

Before the

TENNESSEE REGULATORY AUTHORITY

**IN RE: APPLICATION OF NASHVILLE GAS COMPANY,
A DIVISION OF PIEDMONT NATURAL GAS COMPANY, INC.,
FOR AN ADJUSTMENT OF ITS RATES AND CHARGES, THE APPROVAL OF
REVISED TARIFFS AND THE APPROVAL OF REVISED SERVICE REGULATIONS
DOCKET NO. 03-00313**

**DIRECT TESTIMONY
OF
DAN MCCORMAC**

August 12, 2003

1 **Q. Would you state your name for the record, please?**

2 A. My name is Daniel W. McCormac.

3 **Q. By whom are you employed, Mr. McCormac, and what is your**
4 **position?**

5 A. I am employed by the Attorney General's Office as Coordinator of
6 Analysts for the Consumer Advocate & Protection Division.

7 **Q. What is your educational background and what degrees and**
8 **licenses do you hold?**

9 A. I have a Bachelor of Science Degree in Accounting from David
10 Lipscomb College and I am a licensed Certified Public Accountant
11 in the State of Tennessee.

12 **Q. What is your experience in the field of ratemaking and**
13 **regulatory accounting?**

14 A. I have 27 years of experience in the field of utility ratemaking and
15 regulatory accounting including two and one-half years with the
16 Certified Public Accounting firm of Wilson, Work, Fossett & Greer
17 as the supervisor in the utility consulting segment. I served
18 sixteen years with the Tennessee Public Service Commission,
19 including one year as Technical Assistant to the Commissioners.
20 I have served seven years with the Office of the Attorney General
21 and two years as Chief of Energy and Water at the Tennessee
22 Regulatory Authority (TRA). While employed by the Commission

1 and the Attorney General's Office, I supervised the preparation of
2 many utility rate cases and earnings reviews. As part of these
3 investigations, we developed financial exhibits to present to the
4 Commission or TRA. These investigations supplied evidence to
5 the TRA to enable it to set just and reasonable rates for utility
6 services. In addition, I participated in various special studies and
7 helped in other cases in which I did not testify.

8
9 As the Technical Assistant to the Commissioners I observed
10 hearings and analyzed the issues in each case from a technical
11 perspective. I responded to the Commissioner's requests for
12 expert assistance in evaluating and interpreting the financial
13 evidence in the record. I also provided and checked calculations
14 based on that evidence. In each position, my responsibilities
15 have included making decisions on whether the information
16 provided was adequate and suitable for deciding the questions
17 presented.

18
19 My duties with the Consumer Advocate & Protection Division
20 (CAPD) are similar, but also include the review of various tariffs
21 filed before the TRA. I assist in the decision making process as
22 to whether the terms and conditions of the numerous filings are

1 just and reasonable or whether additional evidence is needed to
2 support the filings. When significant consumer interests appear
3 to be in jeopardy, we investigate further and provide expert
4 testimony before the TRA when needed.

5 **Q. What expertise do you have related to the natural gas**
6 **industry?**

7 A. Since 1976 I have been involved in auditing gas companies,
8 reviewing testimony, tariffs and exhibits, negotiating rates, and
9 preparing testimony and exhibits relating to various revenue,
10 expense, and rate base issues of all major Tennessee gas
11 distribution companies. I have prepared testimony in every major
12 case involving a gas utility since my employment with the Attorney
13 General's office in 1994.

14 **Q. What is your assignment in this docket?**

15 A. I reviewed the projected revenues under the current rates as
16 approved by the TRA in Docket No. 99-00994 in an order dated
17 July 18, 2000. These base rates have been in effect since July
18 1, 2000 but have been adjusted by various Purchased Gas
19 Adjustment factors, Gas Supply Realignment cost surcharges,
20 and Incentive Plan reward surcharges. I reviewed the projected
21 revenues under the Company's proposed rates, the forfeited
22 discounts and uncollectible accounts ratios in the revenue

1 conversion factor, and the cost of gas projection. I supervised the
2 review of Nashville Gas Company's (NGC) projected expenses for
3 the attrition year ending October 31, 2004. I also supervised the
4 review of the projected investments made to provide utility service
5 in Tennessee, commonly referred to as the "rate base." In
6 addition, I reviewed the proposed changes in tariffs and rate
7 design. I will explain all adjustments to rate base and revenues
8 and the associated changes to investments or expenses. I will
9 also present an overview of the CAPD's analysis and present our
10 recommended rate design.

11 **Q. How are the investments, revenues and expenses determined**
12 **in the CAPD's analysis?**

13 A. We analyze the reported financials, variances from previous
14 years, and recent trends to obtain a reasonable estimate of these
15 elements for the twelve months ending October 31, 2004.

16 **Q. Are these projections a reasonable basis for setting rates?**

17 A. Yes. The accepted and proven standard used to set rates is to
18 properly match revenues, expenses, and investment. The use of
19 a reasonably anticipated and properly matched capital structure,
20 revenues, investments, and costs assures NGC's investors a
21 reasonable opportunity to earn a reasonable return on those
22 investments.

1 Some projections like interest on customer deposits are easily
2 computed. Other projections are more difficult. For example,
3 NGC projected the cost of medical insurance to increase by 18%.
4 Even though most unknown expense projections are based on
5 the GDP price deflator, this projection appears to be a reasonable
6 estimate due to recent premium increases and current trends in
7 the business. We therefore did not challenge this increase in this
8 case. Another example of a forward-looking estimate that reflects
9 a major change due to recent events is the inclusion of a 90%
10 increase in Gas Inventories since the last rate case in 1999. The
11 projected increase from \$10 million in 1999 to \$19 million in this
12 case (CAPD Exhibit, Schedule 3) reflects the most recently
13 available data including NYMEX futures contract prices at the
14 time we reviewed that data in mid July. The fact that these prices
15 change every hour of every trading day does not make it an
16 unreasonable adjustment. We try to use the latest estimates to
17 recognize any major changes that would distort the projected
18 earnings picture of this company. NGC's future earnings cannot
19 be accurately projected without properly matching all revenue,
20 expenses, investments and sources of capital.

21 **Q. What were the conclusions from the Consumer Advocate's**
22 **analysis?**

1 A. We conclude that Nashville Gas Company's existing rates should
2 be increased by about \$1,900,000. The results of the Consumer
3 Advocate's analysis are presented in Exhibit CAPD and Exhibit
4 CAPD-SB. The cost of service is summarized on Schedule 1 of
5 Exhibit CAPD. Rates should be calculated on a Rate Base of
6 \$258,662,000, an Operating Income at Present Rates of
7 \$15,671,000 and a gross revenue conversion factor of 1.640709
8 as shown on CAPD Exhibit, Schedule 1. Rates should be
9 increased to produce a fair rate of return of 6.5%.

10

11 Mr. Michael Chrysler will testify on the Company's proposed new
12 incentive compensation plan and the Company's proposal to
13 obtain funding directly from consumers for certain research and
14 development costs. Mr. Mark Crocker will testify on other
15 expenses and taxes. Dr. Stephen Brown will testify on the
16 appropriate capital structure, cost of common equity, and return
17 on rate base as summarized on CAPD Exhibit, Schedule 12 and
18 supported in detail in Exhibit CAPD-SB.

19 **Q. Do you propose any major adjustments or corrections to the**
20 **revenue projections or cost of gas presented by Nashville**
21 **Gas Company?**

22 A. Yes. First, I have eliminated the cost of gas from the cost of

1 service as shown on Schedule 6. I have also adjusted for certain
2 effects of a significant decline in the wholesale cost of gas since
3 the Company prepared its case.

4 **Q. Please define gas costs and explain how NGC recovers these**
5 **costs.**

6 A. Gas costs include the commodity cost of gas, storage costs and
7 the cost to transport the gas from producers to local gas
8 distribution companies (LDCs). Tennessee's LDC's are protected
9 from most of the risks associated with increases in the cost of gas
10 purchased to supply the needs of consumers. Any price changes
11 are passed to consumers under TRA Rule 1220-4-7 which allows
12 the LDC to adjust the billing rate to keep pace with changes in
13 gas costs. The rule is intended to keep the Company's gross
14 profit stable by preventing the under collection or over collection
15 of gas costs.

16 **Q. Please explain the base rate component of a customer's bill.**

17 A. The most relevant factor in setting rates for Nashville Gas
18 Company is the base rate. This rate is essentially the gross profit
19 margin. The base rate or gross profit represents the difference
20 between the total charges billed to consumers and the actual cost
21 of gas. The base rate and other service charges should cover all
22 just and reasonable operating expenses (other than gas costs),

1 and taxes with sufficient residual to allow an adequate return on
2 the Company's rate base.

3 **Q. How is the base rate component designed?**

4 A. Base rates are designed to cover NGC's total costs and profit
5 requirements in a normal year.

6 **Q. How are rates adjusted to compensate for abnormal
7 weather?**

8 A. The Weather Normalization Adjustment (WNA) allows LDCs to
9 adjust base rates to compensate for abnormal weather. For
10 example, if weather is colder than normal, rates are reduced to
11 compensate for anticipated increases in sales. And if weather is
12 warmer than normal, rates are automatically raised to
13 compensate for anticipated decreases in sales.

14 **Q. Do you have an opinion concerning the cost of service study
15 presented by the Company to support a larger rate increase
16 for residential customers?**

17 A. Yes. The cost of service study presented by the Company is only
18 one method of computing costs and the cost of service approach
19 is only one method of setting rates. There are other methods of
20 calculating cost and other theories for setting rates.

21 **Q. Do cost of service studies provide the best guidance on how
22 to set rates?**

1 A. No. The results may provide general guidelines in calculating
2 costs under certain assumptions, but should only be used as a
3 rough test of the overall reasonableness of the rate design.

4
5 Page 3 of Mr. Fleenor's testimony states that, "cost of service
6 studies are intended only to indicate general and relative levels of
7 profitability." He also states: "Because cost of service studies are
8 based upon various assumptions and subjective evaluations, the
9 resulting returns are only indicative and not definitive." Since the
10 decision before the TRA is to find specific just and reasonable
11 rates, a "general and relative level . . ." study presents only part
12 of the evidence.

13
14 In previous cases, NGC's cost of service estimates were based
15 on the "zero or minimum size main theory." However, page 22 of
16 the National Association of Regulatory Utility Commissioners
17 (NARUC) Gas Distribution Rate Design Manual also states that
18 the "zero or minimum size main theory" is "controversial." For
19 example, if only one assumption is changed (the main and service
20 cost allocation method), the results of the cost study would
21 change remarkably. The results of any cost of service study are
22 relative to the assumptions used in preparing the study.

1 Page 30 of the manual states that:

2 A cost of service study is a series of choices
3 regarding potentially **controversial** methods of
4 identifying and allocating costs incurred by a utility.
5 This illustrative study represents one possible means
6 of computing class cost of service. **There are other**
7 **equally correct methods.** (Emphasis added)

8 In addition, Page 57 states:

9 Gas rate design is **not an abstract application of**
10 **economic principles**, but rather a practical exercise
11 which affects customers in their daily lives. The rate
12 designer should be aware that people need affordable
13 gas to heat their homes and businesses need energy
14 supplies which enable them to remain competitive.
15 The rate designer should be sympathetic to these
16 concerns while continuing to follow the basic rate
17 design principles. (Emphasis added)

18 The cost of service study presented by the Company is an
19 abstract application of economic principles, but it would not be
20 practical to apply literally in setting just and reasonable rates.
21 NGC did not file details supporting its estimation of the allocation
22 of the cost of service in this case. However, such estimates are
23 irrelevant because the current value of service analysis clearly
24 shows that residential rates are already high.

25 **Q. What important factors should be considered in setting**
26 **rates?**

27 A. I agree with the statement on page 9 of the NARUC "Gas
28 Distribution Rate Design Manual":

1 "Utility ratemaking has never been an exact science.
2 The rate structure for a utility should normally be
3 designed to recover the total allowed revenue
4 requirement of the utility, including a fair rate of
5 return. While cost is an important factor in
6 ratemaking, actual rates are often designed to
7 incorporate numerous other factors, including
8 technological, economic, regulatory, political,
9 promotional and social."

10
11 Chapter 3 of the Manual is devoted to the discussion of another
12 theory for setting rates called "value of service." Page 61 states,

13 "Setting rates based on value of service bears little
14 relationship to setting them based on cost of service.
15 . . . When using value of service principles, we
16 normally look . . . to the **cost of alternatives**
17 **available to the customer.** Therefore, **the value of**
18 **service to 'heat only' customers would be the cost**
19 **of a reasonably acceptable alternative means of**
20 **providing heat."**

21
22 At the current winter rates charged by NGC for "heat only" gas
23 customers, consumers heating a home with natural gas will pay
24 \$335 per year or 53% more than the cost to run an electric heat
25 pump. (Exhibit CAPD, Schedule 14). This demonstrates that
26 some current residential rates are 53% too high when measured
27 by the "value of service" approach. This study is based on the
28 same assumptions used by NGC in response to CAPD discovery
29 request item 12 with the exception that the analysis has been
30 corrected to include the effects of NGC's \$8 monthly customer
31 service charge, Metro Nashville's 5.83% franchise fee surcharge,

1 and the 1% surcharge for NGC's incentive plan bonus.

2
3 The current disparity between electric and gas rates should
4 concern the TRA and the Company. The potential loss of
5 customers to alternative energy sources such as electricity would
6 mean the loss of revenues which are contributing to fixed costs.
7 This potential loss also concerns the Consumer Advocate and
8 Protection Division. The loss of these customers would force
9 other customers to pay the remaining fixed costs.

10
11 This point is validated by Mr. Fleenor's statement on page 4 of his
12 testimony that "Value of service considerations rest on the
13 premise that the value of a utility service to a consumer cannot be
14 greater than the cost to that consumer of an equally satisfactory
15 alternate service. Value of service is an important factor in
16 designing and costing residential, commercial and industrial gas
17 rates." Since residential rates are currently higher than a
18 satisfactory alternate service, i.e., a heat pump, current residential
19 rates are in fact priced **above** the value of service for some
20 consumers.

21 **Q. What are some other facts that indicate the**
22 **unreasonableness of NGC's proposed rates?**

1 A. While NGC's current rates for residential service are above the
2 value of the service, NGC has proposed a **37% increase** in
3 **residential** service rates. (Schedule 13) In addition, NGC has
4 proposed a 2% **reduction** for **industrial** customers. There is no
5 evidence that the rates for industrial customers are above the
6 **value of service.**

7
8 In fact, NGC claims that, "The industrial market is the most
9 volatile and value responsive sector since gas often competes
10 with other fuels on a daily or monthly basis" (Direct Testimony of
11 Chuck Fleenor, Page 5). However, when we inquired as to how
12 often the industrial customers switched to other alternatives, we
13 were told that these customers have remained on the system as
14 much as possible. NGC indicated that the only time these
15 customers left the system in the last three years was for 24 days
16 in January of 2001. That relatively brief interruption in service
17 was caused by "supply or capacity" and "storage level" events, not
18 by the relative cost of energy (CAPD Discovery Request No. 10).

19 **Q. How expensive will gas heat be if NGC gets the rate increase**
20 **it has requested?**

21 A. Schedule 14a shows that gas heat could cost 79% more than
22 heat provided from a heat pump. If gas costs stay close to

1 today's rates (a decrease of 13.8 cents per therm from the 66.8
2 cents shown in Exhibit CWF-2), gas rates will only be 60% higher
3 than heat pump rates as shown on Schedule 14b.

4 **Q. What is your recommendation for designing rates?**

5 A. The CAPD proposes that the deficiency in the projected cost of
6 service be allocated as shown on Exhibit CAPD, Schedule 13.

7
8 Using any reasonable analysis, the costs of operating a heat
9 pump are now less than the costs of operating a gas furnace.
10 Raising rates for residential consumers will only hinder efforts to
11 retain NGC's current customer base. Nashville Gas Company's
12 current residential rates are higher than the value of service. The
13 CAPD does not find any conclusive evidence to support a
14 disproportionate increase in residential rates at this time. We
15 therefore request the TRA to avoid increasing NGC's service
16 charges for residential and commercial consumers any more than
17 absolutely necessary. To do so would not only cost consumers,
18 but would also hurt the future of NGC.

19
20 Another important factor in comparing NGC's rates to competitive
21 rates is the fact that electric rates in North Carolina are 19%
22 higher than Nashville Electric Service rates and rates in South

1 Carolina are 30% higher than Nashville Electric Service rates.
2 Therefore, what may be done in the Carolinas may not be
3 relevant in Tennessee. Since TVA power is much less expensive,
4 more attention must be paid to the potential impacts of alternative
5 sources of heat in Tennessee.

6 **Q. How much more will gas heat cost if the TRA adopts the**
7 **rates as proposed by the CAPD?**

8 A. Schedule 14c shows that gas heat will cost 40% more than a heat
9 pump. We certainly hope that the relatively high cost of gas will
10 continue to decrease.

11 **Q. What adjustments to the cost of service are being proposed?**

12 A. I will explain four adjustments to the cost of service as projected
13 by NGC for revenues, uncollectible expense, accumulated
14 depreciation, and gas inventory. These adjustments also caused
15 changes in forfeited discounts revenue, uncollectible expense,
16 and working capital.

17 **Q. Would you explain the revenue adjustment to correct for**
18 **billing errors that occurred within the test year?**

19 A. Yes. Certain billing errors were detected and corrected during the
20 test year ending December 31, 2002. The correction of these
21 errors is quantified in response to CAPD Request No. 36 which
22 shows that sales and transportation volumes as corrected yield

1 about \$80,651 more revenues. These volumes were incorporated
2 into Exhibit CAPD, Schedule 13. This adjustment **reduces**
3 revenue requirements by about \$80,839.

4
5 The projected gross profit from base rates and service charges
6 for NGC under current rates after this adjustment is about
7 \$82,266,000 as shown on Line 1 of Schedule 6.

8 **Q. Would you explain the adjustment to uncollectible expenses?**

9 A. Yes. Uncollectible expenses were adjusted to include the total
10 projected uncollectible expense for the attrition year. The total
11 uncollectible expense ratio was computed by taking the total net
12 write-offs for the last three calendar years as a ratio of gross
13 revenues excluding transportation customers as shown on Exhibit
14 CAPD, Schedule 11. This adjustment is based on the same data
15 used by NGC as shown on page 47 of prefiled data item No. 25.
16 The results are incorporated into the cost of service and revenue
17 conversion factor as summarized in Exhibit CAPD, Schedules 8
18 and 11. This adjustment **increases** revenue requirements by
19 about \$334,000 depending on the cost of capital variations
20 caused by the lead lag adjustment of this item.

21 **Q. Would you explain the adjustment to accumulated**
22 **depreciation?**

1 A. Yes. NGC's calculation on page 125 of prefiled item No. 25
2 included a math error. The corrected formula for the April 30,
3 2003 balance in accumulated depreciation yields an increase of
4 \$2,694,437 as included in Exhibit CAPD, Schedule 2. This
5 adjustment **reduces** revenue requirements by about \$387,000
6 depending on the cost of capital variations caused by the lead lag
7 adjustment of this item.

8 **Q. Would you explain the adjustment to Gas Inventories on**
9 **Exhibit CAPD, Schedule 3?**

10 A. Yes. The projected gas inventories balance was reduced by
11 \$4,697,742 to reflect the decrease in actual gas costs added to
12 inventory through June 2003 and market projections for the
13 attrition year as of July 2003. This calculation was prepared by
14 NGC at our request to revise page 107 of prefile Data Request
15 #25. A similar adjustment was made to the cost of gas to reflect
16 the associated impacts on forfeited discounts revenues,
17 uncollectible expenses, and working capital requirements. These
18 adjustments **reduce** the revenue requirements by about \$584,000
19 depending on the cost of capital variations caused by the lead lag
20 adjustment of this item.

21 **Q. Does this conclude your pre-filed direct testimony?**

22 A. Yes.

BEFORE THE TENNESSEE REGULATORY AUTHORITY
AT NASHVILLE, TENNESSEE

IN RE: APPLICATION OF NASHVILLE GAS COMPANY, A
DIVISION OF PIEDMONT NATURAL GAS COMPANY,
INC., FOR AN ADJUSTMENT OF ITS RATES AND
CHARGES, THE APPROVAL OF REVISED TARIFFS AND
THE APPROVAL OF REVISED SERVICE REGULATIONS

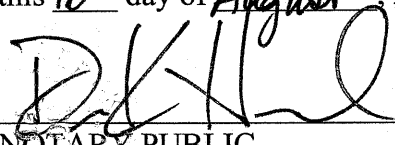
DOCKET NO. 03-00313

AFFIDAVIT

I, Dan McCormac, Coordinator of Analysts, for the Consumer Advocate & Protection Division of the Attorney General's Office, hereby certify that the attached Direct Testimony represents my opinion in the above-referenced case and the opinion of the Consumer Advocate & Protection Division.


DAN MCCORMAC

Sworn to and subscribed before me
this 18 day of August, 2003.


NOTARY PUBLIC

My commission expires: Sept 24, 2005

EXHIBIT
CAPD

Nashville Gas Company
Index to Exhibits
For the 12 Months Ending October 31, 2004

	<u>Exhibit No.</u>
Results of Operations	1
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Nashville Gas Company
Results of Operations
For the 12 Months Ending October 31, 2004

Line No.		CAPD		Company	E/	Difference
1	Rate Base	258,661,730	A/	266,172,310		(7,510,580)
2	Operating Income at Present Rates	15,670,653	B/	15,983,418		(312,765)
3	Earned Rate of Return	6.06%		6.00%		0.05%
4	Fair Rate of Return	6.50%	C/	10.23%		-3.73%
5	Required Operating Income	16,813,012		27,229,427		(10,416,415)
6	Operating Income Deficiency	1,142,359		11,246,009		(10,103,650)
7	Gross Revenue Conversion Factor	1.640709	D/	1.629070		0.011639
8	Revenue Deficiency	1,874,279		18,320,536		(16,446,257)

A/ Schedule 2, line 11
B/ Schedule 6, line 11
C/ Schedule 12, line 4
D/ Schedule 11, line 10
E/ Company Forecast

Nashville Gas Company
Comparative Rate Base
For the 12 Months Ending October 31, 2004

Line No.		CAPD	Company B/	Difference
1	Utility Plant in Service	468,507,509	468,507,509	-
2	Construction Work in Progress	6,536,531	6,536,531	-
3	Working Capital	11,003,013 A/	15,819,156	(4,816,143)
4	Total Additions	<u>486,047,053</u>	<u>490,863,196</u>	<u>(4,816,143)</u>
5	Accumulated Depreciation	199,411,506	196,717,069	2,694,437 C/
6	Accumulated Deferred Income Taxes	23,313,096	23,313,096	-
7	Customer Advances for Construction	187,175	187,175	-
8	Contributions In Aid of Construction	4,473,546	4,473,546	-
9	Pre-1971 Unamortized Investment Tax Credit	-	-	-
10	Total Deductions	<u>227,385,323</u>	<u>224,690,886</u>	<u>2,694,437</u>
11	Rate Base	<u>258,661,730</u>	<u>266,172,310</u>	<u>(7,510,580)</u>

A/ Schedule 3, Line 13

B/ Company Forecast

C/ W/P DWM-2 and response to TRA Staff DR #127

Nashville Gas Company
Comparative Working Capital
For the 12 Months Ending October 31, 2004

Line No.		CAPD	Company C/	Difference
1	Cash	<u>16,131</u>	<u>16,131</u>	-
2	Materials and Supplies	539,281	539,281	-
3	Gas Inventories	19,160,173 A/	23,857,915	(4,697,742)
4	Prepayments	1,000,306	1,000,306	-
5	Other Accounts Receivable	<u>11,217</u>	<u>11,217</u>	-
6	Total Additions	<u>20,727,108</u>	<u>25,424,850</u>	<u>(4,697,742)</u>
7	Unpaid Materials and Supplies	62,009	62,009	-
8	Unpaid CWIP	44,106	44,106	-
9	Customer Deposits	3,868,378	3,868,378	-
10	Other Liabilities	11,854	11,854	-
11	Lead-Lag Study	<u>5,737,748 B/</u>	<u>5,619,347</u>	<u>118,401</u>
12	Total Deductions	<u>9,724,095</u>	<u>9,605,694</u>	<u>118,401</u>
13	Working Capital	<u><u>11,003,013</u></u>	<u><u>15,819,156</u></u>	<u><u>(4,816,143)</u></u>

A/ NGC's revised response to pre-filed request #25, p. 107 (W/P MDC-1)

B/ Schedule 5, Line 7

C/ Company W/P WC-1

Nashville Gas Company
Working Capital Expense Lag
For the 12 Months Ending October 31, 2004

Line No.		Amount A/	Lag A/	Dollar Days
1	Salaries and Wages	17,721,485	11	194,936,334
2	Purchased Gas Expense	115,869,340	41	4,707,771,284
3	Odorant Cost	43,737	41	1,777,034
4	Uncollectible Accounts Expense	863,207	432	372,508,260
5	Pension Expense	574,016	1	591,236
6	Injuries and Damages	872,844	-	-
7	Employee Benefits - Insurance	2,846,474	7	19,099,841
8	Materials and Supplies	324,232	-	-
9	Transportation	927,497	6	5,518,607
10	Long Term Incentive Plan	545,089	867	472,690,279
11	Salary Investment Plan	490,125	11	5,268,844
12	SEBP - Salary Continuation	-	-	-
13	AGA Dues	81,460	33	2,695,511
14	Other Operation and Maintenance Exp.	9,969,248	7	69,385,969
15	Depreciation Expense	18,232,156	-	-
16	Taxes Other Than Income Taxes	8,938,625	169	1,512,594,123
17	Investment Tax Credit Amortization	(150,566)	-	-
18	Federal Income Tax - Current	1,702,805	38	64,706,574
19	Federal Income Tax - Deferred	2,804,796	-	-
20	State Income Tax - Current	751,510	61	45,654,259
21	State Income Tax - Deferred	150,180	-	-
22	Interest Expense - Short-term Debt	413,859	(18)	(7,449,458)
23	Interest Expense - Long-term Debt	7,785,718	76	595,140,291
24	Common Equity	8,613,436	45	387,604,603
25	Total Cost of Service	<u>200,371,273</u>	<u>42.17</u>	<u>8,450,493,591</u>
26	Daily Cost of Service	<u>548,962</u>		

A/ Company workpapers as adjusted

Nashville Gas Company
Lead Lag Results
For the 12 Months Ending October 31, 2004

<u>Line No.</u>		<u>Amount</u>	
1	Revenue Lag	35.93	A/
2	Expense Lag	42.17	B/
3	Net Lag	(6.24)	
4	Daily Cost of Service	548,962	C/
5	Operating Funds Advanced	(3,427,819)	
6	Incidental Collections	2,309,929	A/
7	Lead Lag Results	<u>(5,737,748)</u>	

A/ Company Forecast
B/ Schedule 4, Line 25
C/ Schedule 4, Line 26

Nashville Gas Company
Income Statement at Current Rates
For the 12 Months Ending October 31, 2004

Line No.		CAPD	Company B/	Difference
1	Revenues for distribution services	82,265,645	82,308,461	(42,816) C/
2	Odorant Cost	43,737	-	43,737 D/
3	Other Operation and Maintenance	34,975,013 A/	35,314,324	(339,311)
4	Interest on Customer Deposits	232,103	232,103	-
5	Depreciation and Amortization Exp.	18,232,156	18,232,156	-
6	Taxes Other Than Income	8,938,625	8,938,625	-
7	State Excise Tax	779,513 E/	638,335	141,178
8	Federal Income Tax	3,741,918 E/	3,317,573	424,345
9	Total Operating Expense	66,943,065	66,673,116	269,949
10	AFUDC	348,073	348,073	-
11	Net Operating Income for Return	15,670,653	15,983,418	(312,765)

A/ Schedule 8, Line 30

B/ NGC W/P IS-1 and supporting schedules

C/ Increase in margin for billing adj.

Decrease in forfeited discounts

80,651

(123,467)

(42,816)

DWM-3

0.007435 * change in revenues

D/ W/P ODOR-1

E/ Schedule 10

Nashville Gas Company
Income Statement at Current Rates
For the 12 Months Ending October 31, 2004

Line No.		CAPD	Company B/	Difference
1	Operating Revenues	198,134,985	214,864,605	(16,729,620) C/
2	Cost of Gas	115,869,340	132,556,144	(16,686,804) C/
3	Odorant Cost	43,737	-	43,737 D/
4	Other Operation and Maintenance	34,975,013 A/	35,314,324	(339,311)
5	Interest on Customer Deposits	232,103	232,103	-
6	Depreciation and Amortization Exp.	18,232,156	18,232,156	-
7	Taxes Other Than Income	8,938,625	8,938,625	-
8	State Excise Tax	779,513 E/	638,335	141,178
9	Federal Income Tax	3,741,918 E/	3,317,573	424,345
10	Total Operating Expense	182,812,405	199,229,260	(16,416,855)
11	AFUDC	348,073	348,073	-
12	Net Operating Income for Return	15,670,653	15,983,418	(312,765)

A/ Schedule 8, Line 30

B/ NGC W/P IS-1 and supporting schedules

C/ Decrease in COG

Increase in margin for billing adj.

Decrease in forfeited discounts

(16,686,804)

80,651

(123,467)

(16,729,620)

DWM-1

DWM-3

0.007435 * change in revenues

D/ W/P ODOR-1

E/ Schedule 10

Nashville Gas Company
Income Statement at Proposed Rates
For the 12 Months Ending October 31, 2004

Line No.		Current Rates	A/	Adjustments	B/	Proposed Rates
1	Operating Revenues	<u>198,134,985</u>		<u>1,888,215</u>		<u>200,023,200</u>
2	Cost of Gas	115,869,340		-		115,869,340
3	Odorant Cost	43,737		-		43,737
4	Other Operations and Maintenance	34,975,013		8,561	C/	34,983,574
5	Interest on Customer Deposits	232,103		-		232,103
6	Depreciation and Amortization Expense	18,232,156		-		18,232,156
7	Taxes Other Than Income	8,938,625		-		8,938,625
8	State Excise Tax	779,513		122,177	C/	901,690
9	Federal Income Tax	<u>3,741,918</u>		<u>615,117</u>	C/	<u>4,357,035</u>
10	Total Operating Expense	182,812,405		745,855		183,558,261
11	AFUDC	<u>348,073</u>		-		<u>348,073</u>
12	Net Operating Income for Return	<u>15,670,653</u>		<u>1,142,359</u>		<u>16,813,012</u>

A/ Schedule 6a

B/ Operating revenues from rate adjustments
Forfeited Discounts caused by rate adjustments
Total

1,874,279

13,935

1,888,215

C/ Retention conversion factor effects (Sch. 11)

Nashville Gas Company
Operation and Maintenance Expenses
For the 12 Months Ending October 31, 2004

Line No.		CAPD	Company	B/	Difference
1	Salaries and Wages	12,857,249	12,857,249		-
2	Allocated Salaries & Wages	4,864,236	5,251,130		(386,894) C/
3	Long-Term Incentive Pay	545,089	545,089		-
4	LNG Operations	88,614	88,614		-
5	LNG Maintenance	58,719	58,719		-
6	Distribution - Operations	674,507	674,507		-
7	Distribution - CIE	422,100	422,100		-
8	Distribution - Maintenance	2,672,801	2,672,801		-
9	Distribution - Customer Acc.	1,146,149	1,146,149		-
10	GTI Funding	-	185,409		(185,409) D/
11	Customer Service	7,044	7,044		-
12	Sales Expense	183,347	183,347		-
13	Advertising Expense	466,783	466,783		-
14	Uncollectible Expense	854,646 A/	565,059		289,587
15	Pension Expense	574,016	660,272		(86,256) E/
16	Injuries and Damages	1,128,289	1,128,289		-
17	Employee Benefits - Insurance	3,533,794	3,455,804		77,990 F/
18	Employee Savings Plan	595,679	595,679		-
19	Other Employee Benefits	165,777	165,777		-
20	Property Insurance	89,936	89,936		-
21	A&G Office Supply Expense	1,925,015	1,925,015		-
22	Reg. Comm. Expense	80,502	80,502		-
23	Outside Services	1,801,693	1,850,021		(48,328) G/
24	Misc. General	2,018,069	2,018,069		-
25	Misc. Expense	8,680	8,680		-
26	Rents	34,642	34,642		-
27	Training	36,114	36,114		-
28	Transferred Credit	(1,858,476)	(1,858,476)		-
29	Corporate Office Allocation Adjust.	-	-		-
30	Total O&M Expense	<u>34,975,013</u>	<u>35,314,324</u>		<u>(339,311)</u>

A/ Uncollectible ratio x non-transportation revenues (0.004534 x 188,497,051)
See W/P DWM-1

B/ Company Forecast

C/ PF Item #25, p. 32 & #44, SW7, p7

D/ Exhibit MDC-4

E/ MHC PEN-1

F/ MHC AA-1

G/ MHC U-2

Nashville Gas Company
Taxes Other Than Income Taxes
For the 12 Months Ending October 31, 2004

Line No.		CAPD	Company ^{A/}	Difference
1	Property Tax	5,366,668	5,366,668	-
2	State Gross Receipts Tax	1,166,379	1,166,379	-
3	Payroll Taxes	1,417,029	1,417,029	-
4	Franchise Tax	702,955	702,955	-
5	Other General Taxes	(1,906)	(1,906)	-
6	TRA Utility Fee	287,500	287,500	-
7	Total Taxes Other Than Income Taxes	8,938,625	8,938,625	-

A/ Company Forecast

Nashville Gas Company
Excise and Income Taxes
For the 12 Months Ending October 31, 2004

Line No.		Attrition Amount		Proposed Rates Attrition Amount E/
1	Operating Revenues	198,134,985	A/	200,023,200
2	Cost of Gas	115,869,340	A/	115,869,340
3	Odorant Cost	43,737	A/	43,737
4	Other Operation and Maintenance	34,975,013	A/	34,983,574
5	Depreciation and Amortization Expense	18,232,156	A/	18,232,156
6	Taxes Other Than Income	8,938,625	B/	8,938,625
7	NOI Before Excise and Income Taxes	20,076,114		21,955,767
8	less Interest on Customer Deposits	232,103	C/	232,103
9	plus AFUDC	348,073	C/	348,073
10	less Interest Expense	8,199,577	D/	8,199,577 D/
11	Pre-tax Book Income	11,992,507		13,872,161
12	Schedule M Adjustments	-		-
13	Excise Taxable Income	11,992,507		13,872,161
14	Excise Tax Rate	6.50%		6.50%
15	Excise Tax	779,513		901,690
16	Pre-tax Book Income	11,992,507		13,872,161
17	Excise Tax	779,513		901,690
18	Schedule M Adjustments	-		-
19	FIT Taxable Income	11,212,994		12,970,470
20	FIT Rate	35.00%		35.00%
21	Federal Income Tax Payable	3,924,548		4,539,665
22	ITC Amortization	150,566	C/	150,566
23	Amortization of Excess Deferred FIT	32,064	C/	32,064
24	Federal Income Tax Deferred	-		-
25	Federal Income Tax Expense	3,741,918		4,357,035

- A/ Schedule 6a
B/ Schedule 9, Line 7
C/ Company Forecast
D/ Rate Base * Weighted Cost of Debt
(Schedule 2, Line 11 * Schedule 12 Line 1 + Line 2)
E/ Schedule 7

Nashville Gas Company
Revenue Conversion Factor
For the 12 Months Ending October 31, 2004

Line No.		Amount	Balance
1	Operating Revenues		1.000000
2	Add: Forfeited Discounts	0.007435 A/	0.007435
3	Balance		1.007435
4	Uncollectible Ratio	0.004534 B/	0.004568
5	Balance		1.002867
6	State Excise Tax	0.065000 C/	0.065186
7	Balance		0.937681
8	Federal Income Tax	0.350000 C/	0.328188
9	Balance		0.609493
10	Revenue Conversion Factor (1 / Line 9)		1.640709

A/ Filing Guidelines Item 25, P. 42

B/ Filing Guidelines Item 25, P. 47 adjusted to include all uncollectibles (\$2,132,710 / \$470,411,854) per DWM-1

C/ Statutory rate

Nashville Gas Company
Cost of Capital
For the 12 Months Ending October 31, 2004

Line No.		Ratio	Cost	Weighted Cost
1	Short Term Debt	12.20%	1.30%	0.16%
2	Long Term Debt	44.00%	6.83%	3.01%
3	Stockholder's Equity	<u>43.80%</u>	7.60%	<u>3.33%</u>
4	Total	<u>100.00%</u>		<u>6.50%</u>

Source: Exhibit SB

Nashville Gas Company
Transportation Rates and Revenue Summary
For the 12 Months Ending 10/31/04

03-00313
Exhibit CAPD
Schedule 13
Page 1 of 2

	(1) Current Rates	(2) NGC Proposed Rates	(3) NGC % Incr.	(4) CAPD Proposed Rates	(5) CAPD Revenues	(6) CAPD % Increase
<u>Residential</u>						
Winter Bills/ Customer Charge	\$8.00	\$14.00	75%	\$9.45	\$6,483,002	18%
Summer Bills/ Customer Charge	\$8.00	\$12.00	50%	\$8.00	7,528,448	0%
Winter	2.9884	3.8100	27%	2.9800	24,976,828	0%
Summer	2.6255	3.2998	26%	2.6200	6,230,426	0%
Discounted (A/C rate)	2.2255	3.2998	48%	2.6200	9,241	18%
Total rate (1)			37%		45,227,945	2.1%
<u>Commercial</u>						
Rate 302, 332 Bills/ Customer Charge	22.00	22.00	0%	\$24.10	4,813,927	10%
Rate 352, 362 Bills/ Customer Charge	22.00	75.00	241%	\$38.00	12,350	73%
Winter	3.4839	3.8100	9%	3.5000	17,077,092	0%
Summer	3.1233	3.2998	6%	3.1200	6,381,111	0%
Total rate (2)			7%		28,284,480	1.8%
<u>Firm Ind. Sales</u>						
Bills/ Customer Charge	0.00	300.00	#DIV/0!	300.00	207,000	#DIV/0!
Demand dekatherms	8.0000	8.0000	0%	8.0000	649,600	0%
1-1,500	0.8918	0.8000	-10%	0.8000	458,904	-10%
1,501-4,000	0.8195	0.5600	-32%	0.7300	99,335	-11%
4,001-9,000	0.5904	0.4000	-32%	0.5300	1,273	-10%
9,001 & Over	0.2530	0.2400	-5%	0.2400	0	-5%
Total rate (3)			9%		1,416,112	11.1%
<u>Interruptible Sales</u>						
Customer Charge	300.00	300.00	0%	300.00	11,100	0%
1-1,500	0.8034	0.8000	0%	0.8000	23,766	0%
1,501-4,000	0.7382	0.5600	-24%	0.7300	28,795	-1%
4,001-9,000	0.5319	0.4000	-25%	0.5300	22,909	0%
9,001 & Over	0.2280	0.2400	5%	0.2400	801	5%
Total rate (4)			-15%		87,371	-0.5%
<u>Firm Transportation</u>						
Bills/ Customer Charge	0.00	300.00	#DIV/0!	300.00	333,600	#DIV/0!
Billing Determinates	8.0000	8.0000	0%	8.0000	1,313,800	0%
1-1,500	0.8918	0.8000	-10%	0.8000	940,701	-10%
1,501-4,000	0.8195	0.5600	-32%	0.7300	430,723	-11%
4,001-9,000	0.5904	0.4000	-32%	0.5300	111,484	-10%
9,001 & Over	0.2530	0.2400	-5%	0.2400	12,706	-5%
Total rate (7F)			1%		3,143,015	5.3%
<u>Interruptible Transportation</u>						
Customer Charge	300.00	300.00	0%	300.00	195,300	0%
1-1,500	0.8034	0.8000	0%	0.8000	686,952	0%
1,501-4,000	0.7382	0.5600	-24%	0.7300	748,799	-1%
4,001-9,000	0.5319	0.4000	-25%	0.5300	606,602	0%
9,001 & Over	0.2280	0.2400	5%	0.2400	883,239	5%
Total rate (7I)			-9%		3,120,892	1.0%
Total Industrial			-2%		7,767,389	4.5%
<u>Special Contracts</u>						
	752,415	752,415	0%	752,415	752,415	0%
<u>Resale Service</u>						
	0.00	0.00		0.00	0	
Demand	8.0000	8.0000	0%	8.0000	124,800	0%
Commodity	0.7000	0.7000	0%	0.7000	34,533	0%
Total rate (10)			0%		159,333	0%
Total sales & transp.	80,450,771	18,188,314	23%	1,740,791	82,191,562	2.2%
<u>Other Revenues</u>						
Revenues before forfeited discounts	360,851	133,620	37%	133,620	494,471	37.0%
Forfeited Discounts	80,811,622	18,321,934	23%	1,874,411	82,686,033	2.3%
Total Revenues	1,455,130	135,230	9%	135,230	1,590,360	0%
	82,286,752	18,457,164	22%	2,009,641	84,276,393	

Nashville Gas Company
Transportation Rates and Revenues
For the 12 Months Ending 10/31/04

03-00313

Exhibit CAPD

Schedule 13

Page 2 of 2

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Projected DKTHA/	Projected Bills A/ and DTH Demand	Current (4/1/2003) Rates B/	Revenues	NGC Proposed (11/1/2004) Rates C/	Revenues	% Incr.	Current Cost at \$5.60 Billing Rate	PGA Rate	Gas Cost	Current Gross Revs.
Residential										
Winter Bills/ Customer Charge	686,032	\$8.00	\$5,488,256	\$14.00	\$9,604,448	75%	\$8.00	\$0.00	\$0	\$5,488,256
Summer Bills/ Customer Charge	941,056	\$8.00	7,528,448	\$12.00	11,292,672	50%	\$8.00	\$0.00	\$0	7,528,448
Winter	8,381,486	2.9884	25,047,233	3.8100	31,933,462	27%	9.1874	6.1990	51,956,832	77,004,064
Summer	2,378,025	2.6255	6,243,505	3.2998	7,847,007	26%	8.8245	6.1990	14,741,377	20,984,882
Discounted (A/C rate)	3,527	2.2255	7,849	3.2998	11,638	48%	8.4245	6.1990	21,864	29,713
Total rate (1)	10,763,038		44,315,291		60,689,227	37%			66,720,073	111,035,363
Commercial										
Rate 302, 332 Bills/ Customer Charge	199,748	22.00	4,394,456	22.00	4,394,456	0%	\$22.00	\$0.00	0	4,394,456
Rate 352, 362 Bills/ Customer Charge	325	22.00	7,150	75.00	24,375	241%	\$22.00	\$0.00	0	7,150
Winter	4,879,169	3.4839	16,998,537	3.8100	18,589,634	9%	9.6439	6.1600	30,055,681	47,054,218
Summer	2,045,228	3.1233	6,387,861	3.2998	6,748,843	6%	9.2833	6.1600	12,598,604	18,986,465
Total rate (2)	6,924,397		27,788,003		29,757,308	7%			42,654,286	70,442,289
Firm Ind. Sales/Bills										
Bills/ Customer Charge	690	0.00	0	300.00	207,000	#DIV/0!	\$0.00	0.00	0	0
Demand dekatherms	81,200	8.0000	649,600	8.0000	649,600	0%	13.4409	5.4409	441,800	1,091,400
1-1,500	573,630	0.8918	511,563	0.8000	458,904	-10%	6.6975	5.8057	3,330,324	3,841,887
1,501-4,000	136,076	0.8195	111,514	0.5600	76,203	-32%	6.6208	5.8013	789,418	900,932
4,001-9,000	2,401	0.5904	1,418	0.4000	960	-32%	6.3856	5.7952	13,914	15,332
9,001 & Over	0	0.2530	0	0.2400	0	-5%			0	0
Total rate (3)	712,107		1,274,095		1,392,667	9%			4,575,456	5,849,551
Interruptible Sales										
Customer Charge	37	300.00	11,100	300.00	11,100	0%	\$300.00	\$0.00	0	11,100
1-1,500	29,707	0.8034	23,867	0.8000	23,766	0%	6.8396	6.0362	179,317	203,184
1,501-4,000	39,445	0.7382	29,118	0.5600	22,089	-24%	6.7700	6.0318	237,924	267,043
4,001-9,000	43,225	0.5319	22,991	0.4000	17,290	-25%	6.5576	6.0257	260,461	283,452
9,001 & Over	3,337	0.2280	761	0.2400	801	5%	6.2393	6.0113	20,060	20,821
Total rate (4)	115,714		87,837		75,046	-15%			697,762	785,599
Firm Transportation										
Bills/ Customer Charge	1,112	0.00	0	300.00	333,600	#DIV/0!	\$0.00	\$0.00	0	0
Billing Determinates	164,225	8.0000	1,313,800	8.0000	1,313,800	0%	13.4409	5.4409	893,530	2,207,330
1-1,500	1,175,876	0.8918	1,048,646	0.8000	940,701	-10%	0.9167	0.0249	29,279	1,077,926
1,501-4,000	590,032	0.8195	483,531	0.5600	330,418	-32%	0.8400	0.0205	12,096	495,627
4,001-9,000	210,348	0.5904	124,189	0.4000	84,139	-32%	0.6048	0.0144	3,029	127,218
9,001 & Over	52,943	0.2530	13,395	0.2400	12,706	-5%	0.2530	0.0000	0	13,395
Total rate (7F)	2,029,199		2,983,561		3,015,364	1%			937,934	3,921,496
Interruptible Transportation										
Customer Charge	651	300.00	195,300	300.00	195,300	0%	\$300.00	\$0.00	0	195,300
1-1,500	858,690	0.8034	689,872	0.8000	686,952	0%	0.8283	0.0249	21,381	711,253
1,501-4,000	1,025,752	0.7382	757,210	0.5600	574,421	-24%	0.7587	0.0205	21,028	778,238
4,001-9,000	1,144,532	0.5319	608,777	0.4000	457,813	-25%	0.5463	0.0144	16,481	625,258
9,001 & Over	3,680,162	0.2280	839,077	0.2400	883,239	5%	0.2280	0.0000	0	839,077
Total rate (7I)	6,709,136		3,090,235		2,797,725	-9%			58,891	3,149,126
Total Industrial	9,566,156	2,490	7,435,729		7,280,802	-2%			6,270,043	13,705,772
Special Contracts										
	2,852,699		752,415		752,415	0%			0	752,415
Resale Service										
Demand	36	0.00	0	0.00	0		\$0.00	\$0.00	0	0
Commodity	15,600	8.0000	124,800	8.0000	124,800	0%	13.4409	5.44093	84,879	209,679
Total rate (10)	49,333	0.7000	34,533	0.7000	34,533	0%	6.4979	5.79790	286,028	320,561
Total Bills	888,306		159,333		159,333	0%			370,906	530,239
Total sales & trans.										
30,155,623	888,306		80,450,771	18,188,314	98,639,085	23%			116,015,307	196,466,079
11,591,034	(Transported)									
18,564,589	(Sold)									
Other Revenues										
Revenues before forfeited discounts			360,851	133,620	494,471	37%			0	360,851
Forfeited Discounts			80,811,622	18,321,934	99,133,556	23%			116,015,307	196,826,930
Total Revenues			1,455,130	135,230	1,590,360	9%			0	1,455,130
			82,266,752	18,457,164	100,723,916	22%			116,015,307	198,282,060

A/ Rev-1, PF#25, p. 3 and Exhibit CWF-3 as adjusted for billing errors CAPD DR#36.
 B/ Tariff Sheet No. 1
 C/ Exhibit CWF-2

Nashville Energy Prices (HEAT ONLY) At Current Winter Rates

	<u>Heat Pump</u>	<u>Gas Heat</u>	<u>Extra Cost For Gas</u>
1 Efficiency	185%	80%	
2 Energy used	10,157 KWH	800 Therms	
3 Total Cost	\$630	\$964	\$335
4 Extra Cost (%)			<u>53%</u>

	<u>BTU Content</u>	<u>Utilization Efficiency</u>	<u>Net BTUs Available</u>	<u>Current Nashville Prices A/</u>
Electric Heat Pump / KWH	3,413	185%	6,300	\$0.0620 /kwh
Gas / therm	100,000	80%	<u>80,000</u>	\$1.2056 /thm
One therm =			12.70 KWH's	

A/ Reflects incremental prices only (Cost of electricity is based on first 2,000 KWH and excludes the minimum bill, but gas cost includes minimum bill)

NES 736-6900 (\$5.24 + 6.178¢/KWH for first 2,000 -- 6.817¢ over 2000 as of 8/1/03)

Nashville Gas Current tariff (TRA Tariff Sheet No. 1):

Gas rate (per therm)	0.2988	Excludes WNA adjustment
Incentive Plan Surcharge	0.0104	
PGA rate	<u>0.7099</u>	
	1.0192	
Minimum bill per month	\$8.00	
Normal therms used per month	67	
Minimum bill per therm		<u>0.1200</u>
Subtotal		1.1392
Franchise fee surcharge		<u>5.83%</u>
Total rate per therm		<u>\$ 1.2056</u>

**Nashville Energy Prices (HEAT ONLY)
At NGC's Proposed Winter Rates**

	<u>Heat Pump</u>	<u>Gas Heat</u>	<u>Extra Cost For Gas</u>
1 Efficiency	185%	80%	
2 Energy used	10,157 KWH	800 Therms	
3 Total Cost	\$630	\$1,125	\$496
4 Extra Cost (%)			<u>79%</u>

	BTU <u>Content</u>	Utilization <u>Efficiency</u>	Net . BTUs <u>Available</u>	Current Nashville Prices A/ <u>Prices A/</u>
Electric Heat Pump / KWH	3,413	185%	6,300	\$0.0620 /kwh
Gas / therm	100,000	80%	<u>80,000</u>	\$1.4070 /thm
One therm =			12.70 KWH's	

A/ Reflects incremental prices only (Cost of electricity is based on first 2,000 KWH and excludes the minimum bill, but gas cost includes minimum bill)

NES 736-6900 (\$5.24 + 6.178¢/KWH for first 2,000 -- 6.817¢ over 2000 as of 8/1/03)

Nashville Gas per Exhibit CWF-2 and TRA Tariff Sheet No. 1:

Gas rate (per therm)	0.3810	Excludes WNA adjustment
Incentive Plan Surcharge	0.0104	TRA Tariff Sheet No. 1
PGA rate	<u>0.7280</u>	
	1.1194	
Minimum bill per month	\$14.00	
Normal therms used per month	67	
Minimum bill per therm	<u>0.2100</u>	
Subtotal	1.3295	
Franchise fee surcharge	<u>5.83%</u>	
Total rate per therm	<u>\$ 1.4070</u>	

Nashville Energy Prices (HEAT ONLY)
At NGC's Proposed Winter Rates minus \$.138 per Therm Market Adjustment

	<u>Heat Pump</u>	<u>Gas Heat</u>	<u>Extra Cost For Gas</u>
1 Efficiency	185%	80%	
2 Energy used	10,157 KWH	800 Therms	
3 Total Cost	\$630	\$1,009	\$379
4 Extra Cost (%)			<u>60%</u>

	<u>BTU Content</u>	<u>Utilization Efficiency</u>	<u>Net BTUs Available</u>	<u>Current Nashville Prices A/</u>
Electric Heat Pump / KWH	3,413	185%	6,300	\$0.0620 /kwh
Gas / therm	100,000	80%	<u>80,000</u>	\$1.2609 /thm
One therm =			12.70 KWH's	

A/ Reflects incremental prices only (Cost of electricity is based on first 2,000 KWH and excludes the minimum bill, but gas cost includes minimum bill)

NES 736-6900 (\$5.24 + 6.178¢/KWH for first 2,000 -- 6.817¢ over 2000 as of 8/1/03)

Nashville Gas per Exhibit CWF-2 and TRA Tariff Sheet No. 1:

Gas rate (per therm)	0.3810	Excludes WNA adjustment
Incentive Plan Surcharge	0.0104	TRA Tariff Sheet No. 1
PGA rate	0.7280	
Market Adjustment (.53-.668)	<u>-0.1380</u>	
	0.9814	
Minimum bill per month	\$14.00	
Normal therms used per month	67	
Minimum bill per therm	<u>0.2100</u>	
Subtotal	1.1915	
Franchise fee surcharge	<u>5.83%</u>	
Total rate per therm	<u>\$ 1.2609</u>	

Nashville Energy Prices (HEAT ONLY)
At CAPD Proposed Winter Rates minus \$.138 per Therm Market Adjustment

	<u>Heat Pump</u>	<u>Gas Heat</u>	<u>Extra Cost For Gas</u>
1 Efficiency	185%	80%	
2 Energy used	10,157 KWH	800 Therms	
3 Total Cost	\$630	\$881	\$251
4 Extra Cost (%)			<u>40%</u>

	<u>BTU Content</u>	<u>Utilization Efficiency</u>	<u>Net BTUs Available</u>	<u>Current Nashville Prices A/</u>
Electric Heat Pump / KWH	3,413	185%	6,300	\$0.0620 /kwh
Gas / therm	100,000	80%	<u>80,000</u>	\$1.1009 /thm
One therm =			12.70 KWH's	

A/ Reflects incremental prices only (Cost of electricity is based on first 2,000 KWH and excludes the minimum bill, but gas cost includes minimum bill)

NES 736-6900 (\$5.24 + 6.178¢/KWH for first 2,000 -- 6.817¢ over 2000 as of 8/1/03)

Nashville Gas per Exhibit CWF-2, TRA Tariff Sheet No. 1, and Schedule 13:

Gas rate (per therm)	0.2980	Excludes WNA adjustment
Incentive Plan Surcharge	0.0104	TRA Tariff Sheet No. 1
PGA rate	0.7280	
Market Adjustment (.53-.668)	<u>-0.1380</u>	
	0.8984	
Minimum bill per month	\$9.45	
Normal therms used per month	67	
Minimum bill per therm	<u>0.1418</u>	
Subtotal	1.0402	
Franchise fee surcharge	<u>5.83%</u>	
Total rate per therm	<u>\$ 1.1009</u>	